

PANEL DISCUSSIONS: Challenges and Recommendations to ITP
November 19, 2014

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“NEW NORMAL”

California Urban Water Conservation Council (CUWCC)

Challenges to achieve conservation goals and objectives (taken from dialogue, no accompanying slides)

- Client preferences
- Not 100% consensus on achieving goals and objectives
- Finances
- Inconsistencies among municipalities regarding water conservation design regulations
- Tracking water use (metering) and enforcement
- Lack of scientific data regarding plant water use requirements (more frequently asked to calculate down to gallon how much a particular landscape is going to cost)
- Inconsistent maintenance and care of installed landscapes
- Long return on investment to retrofit

- Lack of coordination between local RWQCB water quality, hydro-modification goals, and stormwater capture for irrigation (e.g. may install a cistern that is over an acre foot of water storage but cant use water at end of rainy season for irrigation)
- Issues regarding private reclamation plants
- Oppose incentives to encourage synthetic turf. Perpetuates a wasteful aesthetic.

Conservation practices you recommend to the ITP (taken from dialogue, no accompanying slides)

- Budget-based billing for landscape meters throughout the state
- Standards and incentives for private reclamation plants
- Streamlined approval processes
- Align RWQCB with stormwater capture and reuse
- Continuing education for landscape contractors

WATER SUPPLIERS

City of Santa Monica

Current challenges to achieve conservation goals and objectives

- Internal to Santa Monica
 - Landscaping and irrigation is not considered as vital to health and safety compared to indoor plumbing
 - Plan checkers and inspectors lack of knowledge and experience with sustainable landscaping
 - Many hours spent reviewing and correcting plan sets because the plans submitted do not meet the basic code requirements
- External to Santa Monica
 - Education and Experience: design, install, maintain
 - Landscapers(architects, landscape architects, contractors, landscape contractors, gardeners)
 - Retail/Irrigation Supply Store Staff
 - Manufacturers
 - Nurseries
 - Property Owners
 - Regulation and Enforcement: permits, plan check, inspections
 - Landscapers (architects, landscape architects, contractors, landscape contractors, gardeners)
 - Products: sprinklers, high water use plants
 - Manufacturers
 - Nurseries

Anticipated challenges to achieve conservation goals and objectives

- Internal to Santa Monica

- Knowledgeable staff
- External to Santa Monica
 - Lack of leadership and cooperation amongst landscapers to inform, educate, and assist professional landscapers regarding sustainable landscaping best management practices and complying with state and local laws

Conservation practices you recommend to the ITP

- Consider requiring education and continuing education for licensure – architects and contractors (every kind)
- Consider working with manufacturers to educate professionals and property owners about their best water saving products
- Consider requiring landscape/irrigation permits, plan check, and inspections
- Consider banning water wasting products such as sprinklers and high water use plants (why are we doing turf removal if we allow it to be installed somewhere else)
- Consider promoting the New Normal state-wide

Western Municipal Water District (WMWD)

Current challenges to achieve conservation goals and objectives

- Educating staff that interacts with customers
- Sufficient time and labor to support programs
- Funding to support staff and programs
- Customer Education
 - Increasing customer knowledge
 - Empowerment, changing of water ethic

Anticipated challenges to achieve conservation goals and objectives

- Internal to Organization
 - Loss of knowledgeable staff and institutional knowledge
 - Time
- External to Organization
 - Setting efficiencies based on water use sector
 - Setting clear and reasonable long-term targets
 - Educating regulators and legislators
 - Enforcement by jurisdictional agencies
 - Landscape ordinances

Conservation practices you recommend to the ITP

- Support for allocation-based water rates
- Consistent state-wide messaging
 - In a drought or not; fresh and positive messaging
 - Make SaveOurH2O.org a truly state-wide website
 - Change the water use ethic

- Support development of meaningful product standards
 - WBICs, soil sensors, other smart technology
- Funding of water use efficiency research projects
 - Tech grants, challenge grants

Coachella Valley Water District (CVWD)

Current challenges to achieve conservation goals and objectives

- Internal to Organization
 - Educating all staff
 - Staffing
- External to Organization
 - Low water rates
 - Entitlement mentality by an affluent population
 - Lack of knowledge about water conservation

Anticipated challenges to achieve conservation goals and objectives

- Internal to Organization
 - Organizing and implementing plans
 - Staffing
- External to Organization
 - Low water rates viewed as a conservation impediment
 - Entitlement (“I can afford it.”) mentality

Conservation practices you recommend to the ITP

- Effective Landscape Ordinance requiring:
 - Drip irrigation on shrubs
 - Lower ET adjustment factor
 - Turf setbacks
- Budget tiered rates that incorporate:
 - Landscaped area
 - Weather
 - Irrigation efficiency
- Turf Conversion featuring:
 - Flexibility
 - 80% water reduction with desert-friendly designs
 - Changing thought processes

DESIGN & INSTALL LANDSCAPE INDUSTRY ASSOCIATIONS

California Landscape Contractors Association (CLCA)

Needed from Public Policy Makers

- Water meters everywhere ASAP

- Dedicated landscape-only meters for large landscapes of all kinds
- Rate structures that encourage efficient use
- Rebate programs
- New developments plumbed for reclaimed water
- Enforce Model Ordinance!
- Talk to us!
- Follow directive of SWRCB and target runoff

Suggested Additional Demand Management Measures

- Don't neglect existing landscapes. That's where most of the water is to be saved!
- Measure water use, including landscape water use.
- Price water to reflect its true cost.
- Encourage and perhaps require certification of water managers who service large landscapes.
- Look to CLCA to support any measure that targets waste or otherwise saves water without doing harm to urban landscapes or unnecessarily restricting owners from expressing themselves through their gardens.

American Society of Landscape Architects (ASLA)

Current challenges to achieve conservation goals and objectives

- Internal to Organization
 - Client preferences and lack of 100% consensus on achieving goals and objectives.
- External to Organization
 - Inconsistencies among municipalities regarding water conservation design regulations, tracking (metering), as well as enforcement. Including no link to the water budget based calculations required under the Water Efficient Landscape Ordinance.
 - Lack of scientific data regarding plant water use requirements.
 - Inconsistent maintenance and care of installed landscapes.
 - Acres of existing outdated landscapes and the long Return on Investment to retrofit.
 - Lack of coordination between local Regional Water Quality Control Boards water quality and hydro-modification goals, and stormwater capture for irrigation.

Current challenges to achieve conservation goals and objectives

- External to Organization
 - Socioeconomic impacts of water costs. How can economically depressed communities afford the health and well being benefits of landscape?
 - Existing wasteful landscapes and the cost of retrofitting.

- Aligning Regional Water Quality Control Boards with stormwater capture and re-use.
- Issues regarding private reclamation plants.
- Climate change and severity of droughts. The value of landscape.
- Climate change and severity of droughts. Pressures on groundwater reserves.
- Climate change and severity of droughts. Impacts on economy including agriculture.

Conservation practices you recommend to the ITP

- We would oppose incentives to encourage increase use of Synthetic Turf for purely decorative purposes. This material perpetuates a wasteful aesthetic.
- We also don't advocate for this type of aesthetic that does nothing to reduce our urban heat island and provide other health and well being benefits.
- We hope that the value of regionally appropriate landscapes will be recognized.
- Initiate a budget based billing for landscape meters throughout the state that uses the metrics under the state Water Efficient Landscape Ordinance.
- Develop standards and incentives for private reclamation plants. Streamline approval processes.
- Align Regional Water Quality Control Boards with stormwater capture and re-use.

Association of Professional Landscape Designers (APLD)

Current challenges to achieve conservation goals and objectives

- APLD believes that water conservation will only gain traction with regular people if it is part of a holistic system; in order to achieve landscape water conservation, we need to use a whole-systems approach, and this may be at cross-purposes with a "water conservation at all cost" message.
- Water conservation is often framed as a short-term issue; APLD CA believes water conservation, as part of a holistic system, is along term landscaping ethos, and needs to be marketed as such.
- APLD members educate the public on the importance of soil, rain water harvesting, plant selection, and the use of mulch and compost, not just irrigation efficiency, and adherence to this approach has given our members the most important measure of success – recognition in the marketplace (work).
- California Chapter has been leading the National organization to develop changes to the membership rules and qualifications. Starting in 2015, criteria for demonstrating competency including testing, education and CEUs will begin to be phased in.

Anticipated challenges to achieve conservation goals and objectives

- Resistance by experienced design professionals to learn and practice the "New Normal" of landscape design
- General industry lack of understanding about new science in the plant-soil-water relationship, and the critical role of soil security in water conservation.

- Baseline standards for sustainable landscapes using the watershed approach have not been implemented throughout CA; MWELo has not gone far enough.
- Several regional groups implementing MWELo actively have excluded Landscape Designers from the certifying process, and therefore have limited the public's access to design expertise (Riverside county, San Diego county for example)
- Under the current Landscape Architecture Practice Act, California consumers have had their choices limited for which professionals they may employ legally to create complete landscape plans and provide on-site project management.
- More enforcement and one-on-one coaching will be needed to bring high water users into compliance with water conservation objectives.

Conservation practices you recommend to the ITP

- Turf removal rebates (especially those funded with State funds) should enforce installation of multi-benefit retrofits in order to qualify for the rebate, creating long-term solutions. For example, residential landscapes could be required to use at least 20% locally native plant material, redirect downspouts into the landscaped areas, and exclude any invasive plant material. No rebates should be provided to landscapes that do not retain rainwater.
- Incentives should be developed for returning organic material to soils in urban landscapes. At least 3" of compost and organic mulch should be encouraged on all open soil. No rebates should be awarded to landscapes without organic mulch.
- Incentives and education should be developed for reduction of irrigated areas so long as a multi-benefit retrofit has been installed.
- Artificial turf should be excluded from rebates because of its heat island effect, and long-term degradation of soil and habitat.
- A program should be funded that supports municipalities in the removal of turf in all parkways and medians, accompanied by the planting of trees/rain gardens and cutting of curbs to provide passive watering.
- Citizen scientists help enforce fines for dry weather run off on private and public properties – enlist Goldhirsh Foundation
- Fund more aggressive and transparent public outreach and education programs that encourage a watershed approach and include one-on-one coaching.
- Create statewide standards that are more aggressive in landscape water budgeting (outright including rainwater offset) and grading for rainwater capture than MWELo. Specifically permit Landscape Designers to certify and submit designs that are within the standards.

American Society of Irrigation Consultants (ASIC)

Current challenges to achieve conservation goals and objectives

- Consistency in Ordinance
 - Interpretation of State requirement
 - Differing opinions on interpretation of local requirements

- Cost to prepare documentation increased
- Requirements non-effective
 - Water days per week with weather-based controls
 - 24-inch setback for overhead spray
 - Monthly water schedules for establishment and established landscape – redundancy with smart controls
 - Carryover from design intent to long-term maintenance
 - Enforcement of audits

Anticipated challenges to achieve conservation goals and objectives

- Internal to Organization
 - Consistency in the ordinances
 - Cost of additional paperwork in design process
- External to Organization
 - Public shift to accept appearance of lower water use plant palettes
 - Proper design and maintenance of drip irrigation
 - Education on use of weather based controls
 - Cost of weather based controls
 - Proper use of harvested water – grey or rainwater

Conservation practices you recommend to the ITP

- Smart timers negate need for cycle based restrictions
- Eliminate 24 inch offset requirement
 - Wasteful use of installation costs that can be use for other methods of conservation
 - Negates use of functional turf in smaller spaces (parkways)
- Eliminate use of drip and/or turf in spaces 8 feet or smaller
 - Provide directive on elimination of overspray or run-off
- Promote use of high efficiency spray devices as alternate technology in turf
 - The irrigation industry has reacted and will continue to react to provide solutions to a requirement
- Provide direction in the ordinance to focus more on the goal and less with the objective.
 - Promotes less constrictive design, innovation, and creativity
- Increased number of CIMIS (non-ideal) locations
- Homeowner efficiency
- Nuisance water harvesting, treatment, supplement

Turfgrass Water Conservation Alliance (TWCA)

Current challenges to achieve conservation goals and objectives

- Internal to Organization
 - Manpower – TWCA is still fairly young and relatively small

- Consistency - Maintaining a consistent message to our members and municipalities over time
 - Market challenges in supplying water conserving live goods
- External to Organization
 - Outdated beliefs about turfgrasses
 - Cultural Practices

Anticipated challenges to achieve conservation goals and objectives

- Internal to Organization
 - Potential for internal strife
 - Continued manpower challenges
 - Market challenges in supplying water conserving live goods
- External to Organization
 - Under-informed decision making processes
 - Cultural practices

Conservation practices you recommend to the ITP

- State of California join the TWCA
- Implement TWCA qualification standards for all turfgrasses in the state
- Recognize TWCA qualified varieties as water saving varieties eligible for lawn replacement rebates
- Require TWCA qualification for all turfgrasses installed in the managed landscape

NON-PROFITS & ACADEMIA

Bay Friendly Coalition

Current and anticipated challenges to achieve conservation goals and objectives

- Prioritization and focus
 - Not everyone needs to do it all
- Avoid duplication of efforts
 - Collaborations/partnerships
- Develop/share metrics
 - Help “sell” to the public
- Shifting public acceptance
 - Education and demonstration

Conservation practices you recommend to the ITP

- Adopt a holistic approach – it’s all related; multi-objective, multi-benefit
- Link water conservation and water quality; air quality and GHG; public health – expands fundability
- Education/training of public/private professionals in design, installation and maintenance

- Address design, installation and maintenance (poor maintenance can undo everything!)
- Rethink WELO – lower threshold?
- Specific practices to adopt:
 - Emphasize soil health from a soil food web perspective
 - Support sheet mulching
 - Establish IPM as required approach to maintenance (chemicals only as last resort and appropriately utilized)
 - Recommend at least 50% native plants to rebuild healthy/beneficial insect populations
- And last but not least, funding – for training, public outreach, demonstration projects, etc.

Ocean Friendly Gardens

Current challenges to achieve conservation goals and objectives

- Internal
 - Capacity – volunteer driven
- External
 - Silos & lack of collaboration
 - Lack of understanding about watershed approach
 - Turf rebates not promoting watershed approach
 - Lack of skilled workforce
 - Consumers under-valuing role of landscape & pros
 - Cheap “solutions” - artificial turf, no-cost retrofits

Anticipated challenges to achieve conservation goals and objectives

- Internal
 - Funding to hire more staff
- External
 - Lack of innovation – need for Civilian Conservation Corps
 - Piece-meal solutions – one-offs; “___ ___ Garden Friendly”
 - Opposition from traditional landscape industry

Conservation practices you recommend to the ITP

- Watershed Approach – adopt & promote
- Integrated governance – engage fellow agencies
- Education – draw from MWD’s Cal Friendly class
- Training – invest in hands-on workforce development
- Data from each retrofit – common metrics, make accessible

Treepeople

Current challenges to achieve conservation goals and objectives

- Internal to Organization
 - Working with Latino and other communities – cultural differences, pre-conceptions sometimes in conflict with sustainable practices
 - Offering all information and website in Spanish
 - Not enough staff to be in every neighborhood, so we concentrate on the most needy (least economically stable and lowest tree canopy)
- External to Organization
 - Low availability of native plants
 - People buy what they know, and that's typically non-native species
 - Working with the residents on Elmer Ave to care for their own landscapes
 - Permit process for irricades
 - Permit process for using recycled water
 - Permits VERY expensive for curb cuts, & replacing turf in parkways with native plants other than what's on the city's list of only "walkable" groundcover.

Anticipated challenges to achieve conservation goals and objectives

- Internal to Organization
 - Funding for staff and resources
- External to Organization
 - People begin to think drought tolerant means desert landscape. Danger of replacing our Mediterranean climate with "desertification".
 - People looking at their sites holistically – more than one solution.

Conservation practices you recommend to the ITP

- Design tall tree planting to achieve at least 25% canopy coverage of the site, including shading sidewalks and dark heat absorbing surfaces like streets. (See the Large Tree Argument http://www.fs.fed.us/psw/programs/uesd/uep/products/cufr_511_large_tree_argument.pdf).
- Stormwater shall be directed to trees and landscapes with curb cuts, swales and berms.
- Adequate soil volume specified for tree planting. Washington D.C. is requiring a minimum soil volume for street trees of 600 to 1,500 cubic feet of soil (depending on how large they can grow).
- Turf in public green spaces for recreation should be maintained with recycled water or massive water catchment systems.
- Healthy soils that absorb water are critical to an urban environment. Organic matter (humus) holds 90% of its weight in water. If we divert as much water as possible to a healthy soil, we'll allow it to sink in to feed our trees and then replenish our groundwater. It's a win – win.

- Humus fights climate change! The humus in soil sequesters carbon. If U.S. crops increase their organic matter by 1%, it would sequester 4.5 billion tons of CO₂ from the air! The cooler our cities, the less water used.
- **Three to four inches of organic mulch (wood chips)** required over soil surface. Decomposed granite (DG) can become as hard and impermeable as concrete and should be used sparingly around trees. DG must be unstabilized in tree wells. Organic mulch (wood chips) is the first choice.
- **Concrete covers shall not be used** in tree wells.
- **Metal grates shall not be used** in tree wells.
- **Rocks shall not be used** in tree wells. If a loose mulch is acceptable, then organic mulch shall be used.
- If a hard surface is required, then **permeable pavers** are acceptable.
- **Trees and shrubs shall be managed in accordance with ANSI A300 - *Management of Trees and Shrubs During Site Planning, Site Development, and Construction***
- **Trees and shrubs shall be pruned in accordance with the ANSI A300 – *Pruning Standard*.**
- **Plants on the Cal-IPC invasive species list shall not be sold in the state of California.** Invasive plants displace natives, use up our valuable water and can be much more flammable (i.e. *Cortaderia selloana* - pampasgrass).

University of CA, Division of Agriculture and Natural Resources (UCANR)

Current challenges to achieve conservation goals and objectives

- Number of UC CE staff is shrinking although demand for expertise continues to rise
 - In environmental horticulture
 - Landscape and Turf
 - Nursery and Floriculture
 - Related fields
 - Irrigation technology
- Educating the public adequately to generate impact is difficult
 - Levels of understanding
 - Motivation
- UC Master Gardener Survey
 - Explaining and teaching clients about managing landscape irrigation is:
 - 93.4% moderately to extremely difficult (214 responses)
- Tell us about explaining and teaching clients about programming irrigation controllers. It is:
 - 95.7% moderately to extremely difficult (209 responses)

Anticipated challenges to achieve conservation goals and objectives

- Irrigating landscapes is EASY to do
- Properly managing landscape irrigation is EXTREMELY difficult

- Managing irrigation with precision is difficult due to variations in:
 - Soil type
 - Plant mixtures
 - Regional climates
 - Irrigation systems: controllers, delivery methods
 - Topography
 - Supply capacity and pressure
- Wide range of knowledge and abilities among professional irrigation managers and the public
- Motivations to conserve
- Inability to measure landscape water use

Conservation practices you recommend to the ITP

- Consistent enforcement of water conservation mandates
- Promote obtaining water conservation expertise
 - Certification programs
- Provide more outreach and education
 - By groups to customize information and message
 - Professional landscape managers- public agency and commercial
 - Growers
 - Retail nursery staff and garden enthusiasts and
 - General public